

CLAIMSWhat is Claimed is:

1 1. A vehicle for enabling attachment of an optic fiber to a multi-integrated
2 optic chip in optical communication therewith, and for maintaining alignment of the
3 fiber at its end adjacent the chip, comprising:

4 a sleeve having a symmetrically-shaped cavity bounded by termini
5 which respectively interface with the chip and the fiber; and

6 an adhesive disposed within the cavity and symmetrically bonding the
7 fiber to the chip.

1 2. A vehicle according to claim 1 wherein:

2 said cavity has an axis and is internally bounded by a wall which is
3 substantially centered on the axis and which extends from said chip-interfacing
4 terminus to said fiber-interfacing terminus;

5 said termini are centered on the axis; and

6 a line lying within any plane intersecting the axis at right angles
7 thereto and terminating in said cavity wall is bisected into two equal segments.

1 3. A vehicle according to claim 1 wherein said sleeve is configured to fit
2 onto the chip and is disposed to accept the fiber.

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1 4. A vehicle according to claim 3 wherein:
2 said cavity has an axis and is internally bounded by a wall which is
3 substantially centered on the axis and which extends from said chip-fitting terminus
4 to said fiber-accepting terminus;
5 said termini are centered on the axis; and
6 a line lying within any plane intersecting the axis at right angles
7 thereto and terminating in said cavity wall is bisected into two equal segments.

1 5. A vehicle according to claim 4 wherein said cavity wall slopes from
2 said chip-fitting terminus to said fiber-accepting terminus.

1 6. A vehicle according to claim 4 in which said sleeve so controls said
2 adhesive as to provide and preserve a symmetrical bonding of the fiber with
3 respect to the chip over gravitational and wicking effects.

1 7. A vehicle according to claim 6 in which said cavity wall is shaped as
2 a truncated right circular cone.

1 8. A vehicle according to claim 6 in which said cavity wall is shaped as
2 a truncated pyramid.

1 9. A vehicle according to claim 4 in which said sleeve is temporarily
2 attached to said adhesive and the chip.

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1 10. A vehicle according to claim 4 in which said sleeve is permanently
2 attached to said adhesive and the chip.

1 11. A method for attaching an optic fiber to an optic chip and for
2 maintaining alignment of the fiber at its end adjacent the chip, comprising the steps
3 of:

4 positioning a sleeve having a symmetrically shaped cavity on the chip;
5 placing an adhesive into the sleeve cavity;
6 inserting the fiber into the cavity;
7 securing the fiber to the chip; and
8 curing the adhesive.

1 12. A method according to claim 11 further comprising the step of aligning
2 the fiber within the cavity and positioning the fiber end adjacent the chip.

1 13. A method according to claim 11 further comprising the step of
2 removing the sleeve from the chip after the adhesive has cured.

1 14. A method according to claim 11 further comprising the step of leaving
2 the sleeve securely on the chip after the adhesive has cured.

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1 15. A method according to claim 11 further comprising the step of
2 providing the sleeve cavity with a truncated pyramid configuration.

1 16. A method according to claim 11 further comprising the step of
2 providing the sleeve cavity with a truncated right circular cone configuration.

1 17. A method for attaching an optic fiber to an optic chip and for
2 maintaining alignment of the fiber at its end adjacent the chip, comprising the steps
3 of:
4 utilizing a sleeve having a symmetrically shaped cavity;
5 placing an adhesive into the sleeve cavity;
6 positioning the sleeve onto the chip;
7 inserting the fiber into the cavity;
8 aligning the fiber within the cavity and positioning the fiber end
9 adjacent the chip;
10 securing the fiber to the chip; and
11 curing the adhesive.

1 18. A method according to claim 17 further comprising the step of
2 removing the sleeve from the chip after the adhesive has cured.

1 19. A method according to claim 17 further comprising the step of leaving
2 the sleeve securely on the chip after the adhesive has cured.

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- 1 20. A method according to claim 17 further comprising the step of
2 providing the sleeve cavity with a truncated pyramid configuration.

- 1 21. A method according to claim 17 further comprising the step of
2 providing the sleeve cavity with a truncated right circular cone configuration.

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